

THE INVENTION CLAIMED IS:

1. A method for testing an integrated circuit (IC) comprising:

5 selecting a bit from each of a plurality of memory arrays formed on an IC chip;

selecting one of the plurality of memory arrays; and

storing the selected bit from the selected memory array.

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2. The method of claim 1 wherein selecting a bit from each of a plurality of memory arrays includes selecting a wordline in each of the plurality of memory arrays.

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3. The method of claim 1 wherein selecting a bit from each of a plurality of memory arrays includes overwriting an initial state bit value of a selection circuit with a value of the selected bit.

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4. The method of claim 1 wherein storing the selected bit from the selected memory array includes storing the selected bit from the selected memory array in a latch.

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5. The method of claim 4 wherein storing the selected bit from the selected memory array includes one of storing an initial state bit value of an output of a selection circuit and storing a modified initial state bit value of the output of the selection circuit in the latch.

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6. The method of claim 1 wherein selecting a bit from each of a plurality of memory arrays formed on an integrated circuit chip, selecting one of the plurality of memory arrays, and storing the selected bit from the  
 5 selected memory array are performed during an ABIST test of the integrated circuit chip.

7. A method for testing an integrated circuit (IC) comprising:

10 selecting a bit from each of a first and second plurality of memory arrays formed on an IC chip;  
 selecting one memory array from each of the first and second plurality of memory arrays; and  
 storing the selected bit from the selected  
 15 memory array for each of the first and second plurality of memory arrays.

8. The method of claim 7 wherein selecting a bit from each of the first and second plurality of memory  
 20 arrays includes selecting a wordline in each of the first and second plurality of memory arrays.

9. The method of claim 7 wherein selecting a bit from each of the first and second plurality of memory  
 25 arrays includes:

overwriting a first initial state bit value with a value of the selected bit from the selected memory array of the first plurality of memory arrays; and  
 overwriting a second initial state bit value  
 30 with a value of the selected bit from the selected memory array of the second plurality of memory arrays.

10. The method of claim 7 wherein storing the selected bit from the selected memory array for each of the first and second plurality of memory arrays includes:

5 storing the selected bit from the selected memory array of the first plurality of memory arrays in a first latch; and

storing the selected bit from the selected memory array of the second plurality of memory arrays in a second latch.

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11. The method of claim 10 wherein storing the selected bit from the selected memory array of the first plurality of memory arrays includes one of storing an initial state bit value of an output of a first selection circuit and storing a modified initial state value of the output of the first selection circuit in a first latch; and

15 wherein storing the selected bit from the selected memory array of the second plurality of memory arrays includes one of storing an initial state bit value of an output of a second selection circuit and storing a modified initial state value of the output of the second selection circuit in a second latch.

12. The method of claim 7 wherein selecting a bit from each of a first and second plurality of memory arrays formed on an IC chip, selecting one memory array from each of the first and second plurality of memory arrays, and storing the selected bit from the selected memory array for each of the first and second plurality of memory arrays are performed during an ABIST test of the IC chip.

13. An apparatus comprising:  
a plurality of memory arrays;  
a latch;  
a selection circuit coupled to the plurality  
5 of memory arrays and to the latch, and adapted to:  
receive a bit from each of the  
plurality of memory arrays;  
select one of the plurality of memory  
arrays; and  
10 store the bit from the selected memory  
array.

14. The apparatus of claim 13 further comprising  
a decoder coupled to the selection circuit.  
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15. The apparatus of claim 14 wherein the  
decoder is adapted to generate signals used to select one  
of the plurality of memory arrays.

16. The apparatus of claim 13 wherein the  
selection circuit comprises a multiplexer.  
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17. An apparatus comprising:  
a first plurality of memory arrays;  
25 a first latch;  
a first selection circuit coupled to the  
first plurality of memory arrays and to the first latch,  
and adapted to:  
(a) receive a bit from each of the first  
30 plurality of memory arrays;  
(b) select one of the first plurality of  
memory arrays; and

(c) store the bit from the selected one of the first plurality of memory arrays;

a second plurality of memory arrays;

a second latch;

5 a second selection circuit coupled to the second plurality of memory arrays and to the second latch, and adapted to:

(d) receive a bit from each of the second plurality of memory arrays;

10 (e) select one of the second plurality of memory arrays; and

(f) store the bit from the selected one of the second plurality of memory arrays.

15 18. The apparatus of claim 17 further comprising a decoder coupled to the first and second selection circuits.

20 19. The apparatus of claim 18 wherein the decoder is adapted to generate signals used to select one memory array from each of the first and second plurality of memory arrays.

25 20. The apparatus of claim 17 wherein the first and second selection circuit comprise multiplexers.

21. The apparatus of claim 17 wherein the first and second selection circuits are adapted to perform (a)-(c) and (d)-(f) simultaneously.